

Application Serial No: 10/529,154

Responsive to the Office Action mailed on: April 29, 2008

REMARKS

This Amendment is in response to the Office Action mailed on April 29, 2008.

Claim 1 is amended editorially and is supported, for example, in the specification page 7, lines 19-22 and in Figure 5A. No new matter is added. Claims 1-3 and 5-10 are pending.

§103 Rejections:

Claims 1-3 and 5-10 are rejected as being unpatentable over Lazar (US Patent No. 2,747,381) in view of Scofield (US Patent No. 2,957,067). This rejection is traversed.

Claim 1 is directed to a cooling device that requires, among other features, a cooler and a cooling chamber that are partitioned by a partition so as to allow cold air to be accumulated in the cooler, and a fan that is disposed on a side of the cooler relative to the partition. The partition in front of the fan has an aperture formed in a flat sheet portion and an open space is formed between the fan and the flat sheet portion in which the aperture is formed. The rotation of the fan generates a discharged flow of cold air discharged from the cooler to the cooling chamber through the aperture and a sucked flow of cold air sucked from the cooling chamber to the cooler through the aperture. Also, the discharged flow and the sucked flow directed from the cooling chamber to the cooler collide with each other in a portion in which the aperture is provided.

The combination of Lazar and Scofield does not teach or suggest these features. The rejection asserts that by combining an oversized fan aperture, central aperture (28) of Scofield, with the system of Lazar, the prior art references teach that a rotation of the fan generates a discharged flow of cold air discharged from the cooler to the cooling chamber through the aperture and a sucked flow of cold air sucked from the cooling chamber to the cooler through the aperture. However, the central aperture (28) is disposed so as to surround the outer periphery of the fan (26) (see column 2, lines 65-69 of Scofield). Thus, the combination of Lazar and Scofield cannot teach or suggest that an open space is formed between the fan and the flat sheet portion in which the aperture is formed, as required by claim 1. Moreover, the heater coils (24 and 25) also cannot be interpreted as the aperture of claim 1, as the heater coils are disposed behind the fan and are not part of a partition between a cooler and a cooling chamber.

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Also, even though the Scofield reference is directed to a heating device, the rejection interprets the airflows (38 and 39), the return currents (47 and 48) and the eddy currents (49-52) as a discharged flow of cold air discharged from the cooler to the cooling chamber through the aperture and as a sucked flow of cold air sucked from the cooling chamber to the cooler through the aperture. Assuming, based on the rejection's interpretation of Scofield, that the heater coils (24 and 25) correspond to a cooler, the oven portions (43-45) correspond to a cooling chamber and the central aperture (28) corresponds to an aperture of claim 1, the airflows (38 and 39) becomes a discharged flow of air discharged from the cooler directly to the cooling chamber, the airflows (32 and 33) become a flow that is discharged from the aperture to the cooler and the airflows (47 and 48) become a flow that has not passed through the cooler. Thus, no air flow is provided that is discharged from the cooler (heater coils 24 and 25) to the cooling chamber (oven portions 43-45) through the aperture (central aperture 28) as required by claim 1. Thus, Scofield cannot be used to teach or suggest that a rotation of the fan generates a discharged flow of cold air discharged from the cooler to the cooling chamber through the aperture and a sucked flow of cold air sucked from the cooling chamber to the cooler through the aperture, as required by claim 1.

Moreover, the high-temperature airflows (38 and 39), heated by heater coils (24 and 25) are discharged directly to the oven portions (43-45) and there is no possibility that the airflows (38 and 39) immediately after being heated and low-temperature airflows (47 and 48) collide with each other in a portion in which the central aperture (28) is provided. Accordingly, Scofield also cannot be used to teach or suggest that the discharged flow and the sucked flow directed from the cooling chamber to the cooler collide with each other in a portion in which the aperture is provided. Lazar does not overcome any of these deficiencies of Scofield. For at least these reasons claim 1 is not suggested by the combination of Scofield and Lazar and should be allowed. Claims 2, 3 and 5-10 depend from claim 1 and should be allowed for at least the same reasons.

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Conclusion:

Applicants respectfully assert that claims 1-3 and 5-10 are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.



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Respectfully submitted,

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